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UNITED STATES ATOMIC ENERGY COMMISSION

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In the Matter Of:

CLASSIFIED TESTIMONY OF:

J. ROBERT OPPENHEIMER

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AFTERNOON SESSION 2:00pm

MR. GRAY: Gentlemen, shall we proceed.

(Thereupon, Albert J. Gasdor, the Reporter, was duly sworn by the Chairman.)

Whereupon,

J. ROBERT OPPENHEIMER

the witness on the stand at the time of taking the recess, resumed the stand, and testified further as follows:

DIRECT EXAMINATION (Continued)

By Mr. Garrison:

Q You were in the course of commenting on the 1949 Report when we recessed.

A Yes.

I find that the Report has a letter of transmittal, that it has a section on affirmative actions to be taken, that it has a section on super bombs and that it has these two annexes of which you have heard.

As far as length is concerned, the section on affirmative actions and the section on super bombs are about equal, and I guess I can't tell you what is in the one on affirmative actions except in the very general terms I used before.

The first page of the page-and-a-half of the Report on the Super bomb is an account of what it is supposed to be, what has to be done in order to bring it about, and some semi-quantitative notions of what it would take, what kind of damage

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it would do, and what kind of a program would be required. The essential point there is that as we then saw it, it was a weapon that you could not be sure of until you tried it out, and it is a problem of calculation and study, and then you went out in the proper place in the Pacific and found out whether it went bang and found out to what extent your ideas had been right and to what extent they had been wrong.

It is on the second page that we start talking about the extent of damage and the first paragraph is just a factual account of the kind of damage, the kind of carrier, and I believe I should not give it--I believe it is classified, even if it is not possibly entirely accurate.

I would like to state one conclusion which is that for anything but very large targets, this was not economical in terms of damage per dollar, and then even for large targets it was uncertain whether it would be economical in terms of damage per dollar. I am not claiming that this was good foresight, but I am just telling you what it says in here.

I am going to read two sentences:

Classified

"We all hope that by one means or another, the development of these weapons can be avoided. We are all reluctant to see the United States take the initiative in precipitating this development. We are all agreed that it would be wrong at the present moment to commit ourselves to an all-out effort towards its development."

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This is the crux of it and it is a strong negative statement. We added to this some comments as to what might be declassified and what ought not to be declassified and held secret if any sort of a public statement were contemplated. If the President were going to say anything about it, there were some things we thought obvious and there would be no harm in mentioning them. Actually, the secret ones were out in the press before very long.

The phrase that you heard this morning, "We believe that the imaginative and concerted attack on the problem has a better than even chance of producing the weapon within five years" -- I find that in this report, and in this report there is, therefore, no statement that it is unfeasible. There is a statement of uncertainty which I believed at the time was a good assessment. You would have found people who would have said this was too conservative, it could be done faster and more certainly, and you would find other people who would say that it could not be done at all; but the statement as read here, no member of the General Advisory Committee objected to, and I have heard very little objection to that as an assessment of the feasibility at that time.

This is the report itself, and there are part of it which I think you should read but, for the record, there are parts that I cannot get into here.

MR. ROBB: Mr. Chairman, I think it might be well

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for the record to show at this point that the Board has read the entire report.

THE WITNESS: I see. Then, what am I doing that for?

MR. ROBB: Doctor, that is up to you.

MR. GARRISON: I thought, Mr. Chairman, there was expressed a little doubt on the part of the Board this morning as to just how completely it was recalled at this time, and I think also for that reason it is quite appropriate for Dr. Oppenheimer to perhaps tell the Board in his own way what was in it.

MR. GRAY: That is what I understood was the purpose of addressing his remarks as he is doing.

MR. GARRISON: I am sure counsel was not mentioning that in the form of an objection.

MR. ROBB: No, not at all. I was not offering that as an objection, and I do not object to anything. In fact, I might say that later on we might want to come back to this report.

THE WITNESS: One important point to make is that lack of feasibility is not the ground on which we made our recommendations.

Another point I ought to make is that lack of economy, although alleged is not the primary or only ground, the competition with fission weapons is obviously in our minds.

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The real reason, the weight, behind the report is, in my opinion, a failing of the existence of these weapons would be a disadvantageous thing. It says this over and over again.

I may read, which I am sure has no security value, from the so-called Minority Report, Fermi and Rabi.

"The fact that no limits exist to the destructiveness of this weapon makes its very existence and the knowledge of its construction a danger to humanity as a whole. It is necessarily an evil thing considered in any light. For these reasons, we believe it important for the President of the United States to tell the American public and the world that we think it wrong on fundamental ethical principles to initiate the development of such a weapon."

In the report which got to be known as the Majority Report, which Conant wrote, DuBridge, Buckley and I signed, things are not quite so ethical and fundamental, but it says in the final paragraph: "In determining not to proceed to develop the Super bomb, we see a unique opportunity of providing by example some limitations on the totality of war and thus of eliminating the fear and arousing the hope of mankind."

I think it is very clear that the objection was that we did not like the weapon, not that it couldn't be made.

Now, it is a matter of speculation whether, if we had before us at that time, if we had had the technical knowledge and inventiveness which we did have somewhat later, we

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would have taken a view of this kind. These are total views where you try to take into account how good the thing is, what the enemy is likely to do, what you can do with it, what the competition is, and the extent to which this is an inevitable step anyway.

My feeling about the delay in the in the hydrogen bomb, and I imagine you want to question me about it, is that if we had had good ideas in 1945, and had we wanted to, this object might have been in existence in 1947 or 1948, perhaps 1948. If we had had all of the good ideas in 1949, I suppose some little time might have been shaved off the development as it actually occurred. If we had not had good ideas in 1951, I do not think we would have it today. In other words, the question of delay is keyed in this case to the question of invention, and I think the record should show--it is known to you--that the principal inventor in all of this business was Teller, with many important contribution from Ulam and other people, such as Nordheim. It has not been quite a one-man show, but he has had some very, very good ideas, and they have kept coming. It is probably true that an idea of mine is embodied in all of these things. It is not very ingenious but it turned out to be very useful, and it was not enough to establish feasibility or have a decisive bearing on their feasibility.

The notion that the thermonuclear arms race was

g-7 something that was in the interests of this country to avoid if it could was very clear to us in 1949. We may have been wrong. We thought it was something to avoid even if we could jump the gun by a couple of years, or even if we could out-produce the enemy, because we were infinitely more vulnerable and infinitely less likely to initiate the use of these weapons, and because the world in which great destruction has been done in all civilized parts of the world is a harder world for America to live with than it is for the Communists to live with. This is an idea which I believe is still right, but I think what was not clear to us then and what is clearer to me now is that it probably lay wholly beyond our power to prevent the Russians somehow from getting ahead with it. I think if we could have taken any action at that time which would have precluded their development of this weapon, it would have been a very good bet to take that, I am sure. I do not know enough about contemporary intelligence to say whether or not our actions have had any effect on theirs but you have ways of finding out about that.

I believe that their atomic effort was quite imitative and that made it quite natural for us to think that their thermonuclear work would be quite imitative and that we should not set the pace in this development. I am trying to explain what I thought and what I believe my friends thought. I am not arguing that this is right, but I am clear about one

g8 thing: if this affair could have been averted on the part of the Russians, I am quite clear that we would be in a safer world today by far.

MR. GRAY: Would you repeat that last sentence. I didn't quite get it.

THE WITNESS: If the development by the enemy as well as by us of thermonuclear weapons could have been averted, I think we would be in a somewhat safer world today than we are. God knows, not entirely safe because atomic bombs are not jolly either.

I remember a few comments at that meeting that I believe it best that people who are coming here to testify speak for themselves about; I am not sure my memory is right--comments of Fermi, of Conant, of Rabi, and of DuBridge as to how they felt about it.

MR. GRAY: How many members of the GAC are being called by you--the members of the GAC at that time?

THE WITNESS: For or five, I think.

MR. GARRISON: Mr. Conant, Dr. Dubridge, Dr. Fermi, Dr. Rabi, Mr. Rowe, Mr. Whitman, Professor Von Neumann--

THE WITNESS: He was not there.

MR. GRAY: It is a substantial membership.

MR. GARRISON: We have a statement from Mr. Manley that we will probably introduce in written form to avoid the necessity of calling him from the State of Washington.